# The Logger's BARK

1916 - Radio Club of Tacoma - 2017

March, 2017 Volume 14, Issue 03 © 2017 Radio Club of Tacoma


## The President's Corner

**Dave W7UUU**

Hello RCT Membership! Our clocks have changed and spring is just around the corner. I love this time of year. But even on a beautiful spring day, our lives could change in the blink of an eye and Amateur Radio could become our only pipeline for communication and our means to garner information about the situation at hand.

Many organizations have been discussing backup communications for some time, especially given the tragedy of the Japan tsunami in 2011. We may feel that Japan is so far away that such things couldn't happen here. But the June 2016 Cascadia Rising report from FEMA was our big wakeup call. Almost the entire West coast of the United States is in the exact same state of jeopardy as was Japan, and perhaps even worse. The report suggested that should this even come to pass, the potential of a 9.0 or greater earthquake far enough off shore could generate a West coast tsunami of never-before-seen proportions, extending from British Columbia to Northern California.

In light of this report, organizations are starting to reach out to the Amateur Radio Community for help in first-steps to putting together a radio network for when all other communications fail. Last fall, one such organization, The Tacoma School District, reached out to Rue Palmer, W7RUE in Olympia. Rue contacted Mike Finnie W7MWF who passed his information along to me.

This led to an initial meeting with Assistant Security director, Steven Lobdell back in January. Our Amateur Radio topics of our first meeting over coffee resonated with Steven, so we scheduled another meeting at TSD headquarters in downtown Tacoma. At this presentation, Miguel Villahermosa, head of security, attended and I gave an outline of just one suggestion for how to deploy Amateur Radio across the entire district, for local, regional, and wide-area communication capabilities all based on direct, simplex operation.

The initial plan suggestion calls for 2m FM 65-watt stations in every single one of the 67 district buildings (all of the schools and admin buildings as well), each with both a 5/8$^{th}$ wave vertical for omni-directional use, as well as a 10-element rotatable beam should longer simplex operation be needed. Each building would also be equipped with 4 or 5 hand-held radios as well. And of course, 5 to 10 individuals (students and staff mixed) would be tasked with obtaining proper licenses.

At two key school locations (based on topography, seismic stability, and other factors) full-fledged HF stations would be established, with 100w operation on 80/40/60 for local/

regional/NVIS use, as well as a 3-element HF beam in the case of a true Cascadia Rising type event wipes out all local communication, so that the district can report over the 2m network as information is obtained on the state of the emergency.

We discussed setting up clubs at the two HF locations (most likely in High Schools), and getting the students involved at a hobby level, not just emergency preparedness. I have made the district aware of our training and VE programs, and the possibility that we might end up creating special class sessions for large groups, perhaps at a school location, as well as larger-group VE sessions.

On balance, I think their plan is solid and makes a lot of sense, as long as it can fit their budget. The Radio Club of Tacoma is in a great place to gain from this exposure as well, by us very likely growing membership as more and more district staff and students become licensed and start "practicing for the Big One".

For the next step, I will be doing a more detailed presentation to the TSD Board of Directors and I will report back next month on the progress of this ambitious but important project. Have a great month everyone!

Dave Ellison W7UUU

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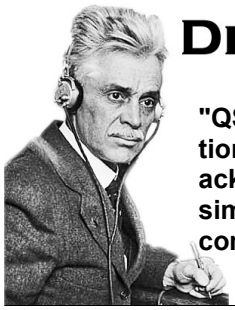
## UPCOMING NOTABLE CLUB ACTIVITIES

3/22, Weds 7:00 PM Clubhouse Activity Night
4/1, Sat, 09:30 AM Donut Fest at Clubhouse
4/5, Weds, 7:00 PM Club Officers Board Meeting
4/xx, All Saturdays, 9:30 AM—Coffee n Donuts
See w7dk.org for more details….
4/11, Tues, 7:00 PM, VE Testing at Clubhouse
4/12, Weds, 7:30 PM– Club Meeting. See w7dk.org

4/26, Weds, 7:00 PM Clubhouse Activity Night
Techy Program TBD.



## DID YOU KNOW?

**"QSL" is a Morse Code abbreviation that means to confirm or acknowledge something. It's similar to "ROGER" in voice communications).**

the Radio Club of Tacoma

Your Radio Club
Needs your help

**RCT needs donations....**

**of Amateur Radio Equipment**

**Donations pay a lot of the Club's Bills. Read about how it works on page 5.**

## Hidden T Hunting * Are You Interested ?

GREAT CAESAR'S GHOST

BY RICH KR7W - BARK EDITOR

First, a History Lesson for newer Radio Club members who read this newsletter: A few years ago there was a big interest in ARDF– aka **A**mateur **R**adio **D**irection **F**inding - Sometimes known as 'Bunny Hunting', 'Fox Hunting' or 'Hidden T' hunting.

Classes were held at the Clubhouse to build 2 meter Yagi Antennas- aka The **T**ape **M**easure **Y**agi- assembled from measuring tape material and PVC pipe. Also an **A**ctive **A**ttenuator– an electronic Gizmo that smoothly reduces the hidden transmitters signal level to prevent overloading the Hunter's receiver (usually a 2 meter Handy Talkie) when close to the transmitter. Super serious hunters purchased commercial receivers from Australia to use in lieu of the AA and Handy Talkie. KR7W built the transmitters using old Icom 2 Meter Handy Talkies, and a controller that turned the transmitter on for 30 seconds and then off for another 30 seconds, plus providing the legal ID in Morse Code.

**Joe K7ZG uses a TMY, Active Attenuator with his Yaesu Handheld 2M radio.**

Two or three Hidden T hunts were held each year at Ft Stillicoom Park and Pt. Defiance Park. 10 to 20 hunters and observers showed up to hunt transmitters as close as 50 yards to a mile away. Loaner equipment was provided (to attach to your own handy-talkie) and an extra TMY or AA were given away to attendees who had a keen interest.

**KR7W floats like a Butterfly and finds his Chi whilst hunting the elusive Hidden-T.**

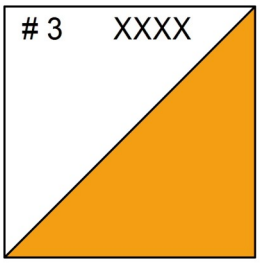
Because no ham license is required… some hams brought their grandchildren to expose them to radio in a game like activity. Participants learned about VHF signal reflections, antenna theory and enjoyed the walk in the Park. A self score sheet determined the fastest hunter– the winner. Everyone seemed to have fun. [end of history lesson]

Recently a few members have asked me if there could be more Hidden T hunts. My reply is "Sure, if there's enough interest". But, ***It's no fun*** for the one or more Hidden T Hunt organizers to prepare their loaner hunting equipment, charge batteries and test transmitters and antennas, and then hide 3 transmitters– then pick it all up and put it away– no fun at all

if no one shows up to give it a try.

Myself and two other club members have agreed to host a Hidden T Hunt on a Saturday or Sunday in May at Pt Defiance Park… ***if there is enough interest***. This lead time gives the organizers time to prepare…. As well as you Hunters to do the same.

**Al N7OMS thinks: It's gotta be hidden under that bench… I know it is.**




**Hidden T Hunters look for the FLAG, not the actual radio transmitter.**

**The White and Orange symbol is used in Orienteering to mark a 'control point'- which is what Map n Compass hunters are looking for.**

If you are interested… what do you do?

**First:** email me: 599kr7w@gmail.com and let me know your interest.

**Second:** Read info here: http://kr7w.blogspot.com/2016/01/2-meter-ardf-attenuator-project-project.html **CLICK LINK**. Plans for Antenna and Attenuator.

**Third :** Already built Attenuator Kit: http://kc9on.com/store/amateur-radio-kits/fox-hunt-offset-attenuator/ **CLICK LINK**.

I am willing to entertain a couple of building parties at the Clubhouse on Saturday out back on the picnic tables or on a Monday Evening if there is enough interest to justify the effort.

**Foto Right: Because of a more depressing winter than usual– The Bark Editor takes Artistic Liberty and creates a Ham Radio Free safe-zone in the page to visit the Great Outdoors.**

**This is Stafford Falls, Mt Rainier National Park along the Eastside Trail– an easy hike in ordinary shoes- about a mile south of the Owyhigh Lakes Trail Head on Hiway 123 (south of Cayuse Pass).**

# HAMSHACKS OF THE MONTH

BY CONTRIBUTING MEMBERS

**W9AE's very interesting Bicycle Mobile** set up is stolen from the www without permission.

**Rans Rocket** Recumbent Bicycle carries 11 pounds of radio equipment. **Antenna:** 4.5-foot Hustler tilt-over mast + Superantennas MP-1 adjustable loading coil + a 4 foot mobile whip.

Top R photo: Favorite place to operate high above Oakland, CA. **CLICK LINK HERE**

**On the handlebars** is a Yaesu FT-817 with Collins SSB and CW filters and W4RT speech processor. Left thumb button operates PTT. Right thumb operates tuning up/down/fast switches. A headset is attached to helmet and plugs into the switchbox on the right. Under the radio is a Palm mini CW paddle. Log information written on the tiny Post-It pad above the radio. The cyclocomputer has a clock.

**In the Rear Pannier Bag:** 14.4V 8AH NiMH battery (12 D cells) and a Tokyo Hy-Power 50W linear amplifier.

W9AE has worked 39 states and 48 DXCC entities on the bike so far.

# AROUND THE CLUBHOUSE
## PAST, PRESENT & FUTURE INFO

**Your Club's Property Management Team has been busy…**

For many years… The PMT has rented two tables at the Mike and Key Hamfest to sell surplus Radio Club property. This year was no different. The group decides and assembles the For Sale items a month before the big sell event. Two weeks prior to the Mike and Key event– PMT hosted a "Pre-Sale Act Now While Quantities Last" event at the Clubhouse's End of the Month Swap-meet + Chili-Dog Saturday. Members browsed and purchased items for a grand total of **$856.**

**A Tip of the Barkie Hat goes out to the RCT Volunteers whom supported the club at the Mike and Key Hamfest.**

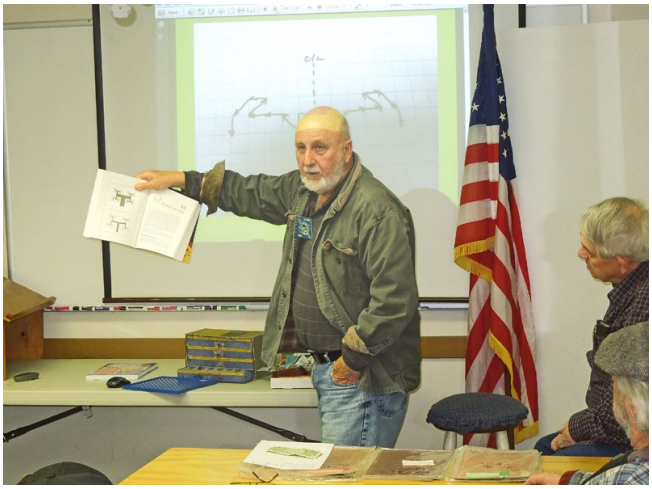
**PMT** took the remaining items plus some consignment sales items to the Mike and Key Swapmeet Event. Renting two tables cost the club $96. After paying the consignees their cash… PMT's net gain for the Mike and Key event was **$1041. Pre-Sale Sales + Mike and Key Sales = $1897** into the clubs bank account. **Kudos to the PMT staff at the M-K hamfest: Jack K7DBU, Red WB7EC, Adam W2NCC, Bob K7MXE and Mike W7MWF**.

**Other Mike and Key info:** The Club hosts an Information Table in the Ham Radio Organizations Area on the second floor of the event. These club members provided info to passer-by-ers and even signed up a couple of new members. **Kudos to: Greta KF7KSW, Bob N7NCP, Jimmy K7SSS.** [Your Bark Editor regrets not having his camera to snap some Kodak (Nikon) Moments… and I'm sorry if I've left anyone out].

**Dateline: Weds, Feb 22, RCT Clubhouse…** The **4th Wednesday club meeting** held at the Clubhouse theme was: Show N Tell. Participants were encouraged to prepare a slide show of a topic of interest or a project to show off or simply sit and enjoy the company of the presenters. Your reporter attended and was pleased with the variety of items presented and the larger than usual turnout. Some items from my reporters notebook:

RCT Prez Dave W7UUU brought a very nice station accessory built in an old Heathkit cabinet. He called it his "Fake Heathkit". It was nicely painted with original green colors and was written up on QRZ.com. Rich KR7W bought his winter project– a World War II Paraset spy radio replica. A slide show and short movie accompanied his presentation. Randy WB4SBP showed us a new antenna for his house and using modeling software to determine that his house's gutters were contributing to the antennas radiation pattern.

Above: Bob KF7GPO showed us some slides of his successful Yagi Antenna Project in his back yard. Bob lives in a CCR neighborhood where ugly antennas are not allowed. He was able to convince his home owners association that his small HF Yagi on a 30 ft mast was a Satellite Antenna. Bob said that after the antenna was in the air for a while… his neighbors didn't even notice it.



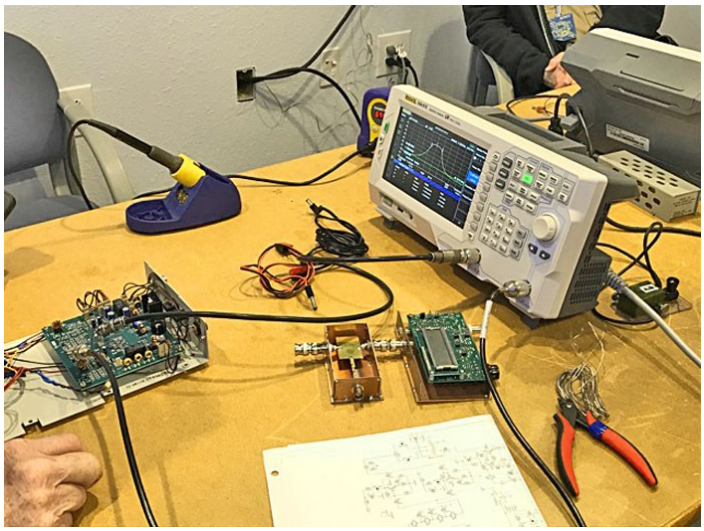
Here's Bob AD7WU, a student of a previous 4th Wednesday Class on Antenna Modeling—explaining an Antenna Project he is working on. A Fractal Antenna. Bob professed his antenna project was successful because his wife could order items from Amazon dot Com using a secure wireless internet connection through his antenna. Bob brought books and slides to back up his theories.

Below– Member John N7TES shows us his $59 BitX-40, 40 Meter SSB Transceiver Kit he recently received from www.hfsigs.com. [ John is one of the six club members who have acquired this fun little SSB Transceiver Kit ]. See next page for more BitX info.

**Dateline: Sunday March 12**– While the New Technician Training Class was held in the Classroom at the Clubhouse… the Radio Club's BitX-40 Transceiver owners group met for 3 hours Upstairs in the Jerry HF Room and Museum.

Club member PJ N7PXY arranged for avid QRP ham radio experimenter and author Wayne NB6M attend this meeting. Wayne generously traveled from his home in Mt Vernon. Wayne and PJ both brought their Rigol Spectrum Analyzers to the party and Wayne showed us how he measures the output of the transmitter for unwanted spurious signals (just like the ARRL Labs would) and the characteristics of the Single Sideband Crystal Filter in the radio.

Wayne brought us up to speed regarding some modifications he has developed to add CW to the BitX radio kit. Photos tell most of the story:



**Above, Chuck AC7QN's radio is probed and analyzed.**

**Graph on Spectrum Analyzer shows passband of SSB filter. This info and a few other measurements tell the radio experimenter how well the voice audio energy will get from the Microphone to the Antenna. "Do I sound mushy?" "You sound OK for QRP, Who else for the Noon Time Net? Any more QRP Check Ins?"**

**Wayne NB6M in center making adjustments to his Spectrum Analyzer to check out the patient on the operating table.**

**Wayne has connected the SSB Crystal Filter to the Analyzer by blob soldering some BNC connectors to the printed circuit board.**

**Radio owner Chuck AC7QN (L) and another BitX owner Dave W7HJT (right) ponder what Wayne is doing.**

**Thanks for the Photos, John N7TES.**

**More Club News…**

Your Fellow Club Member, Bob Heselberg K7MXE, received this nice Thank You letter from the Ashford Fire Department.

**PIERCE COUNTY FIRE DISTRICT 23**
**Headquarters Station: 29815 SR 706 E. Ashford WA**
**P.O. Box 842 Elbe, Washington 98330**
**Phone: 360-569-2752 Fax: 360-569-2036**
**E-Mail: pcfr23@centurytel.net**

**December 12, 2016**

**Radio Club of Tacoma – W7DK**
**P.O. Box 11188**
**Tacoma, WA 98411**

**Board of Directors:**

**On behalf of the members of Pierce County Fire District 23 and the citizens of the Ashford/Elbe/Alder area, we are thanking you for the updated Motorola Desk Tract HAM radio. Bob Heselberg installed the radio for us, and we will now have better communications in case of an emergency. Several of our members obtained their HAM radio operators' licenses a few years back, and will act as operators.**

**We see from your website that the club is now 100 years old. Congratulations. Thank you for your community support over this time and readiness to serve others. We wish you another 100 years of success and community service.**

**Thank you again for the radio and Bob's support.**

**Sincerely,**

**William Tylor**
**Chairman**

**Garry Olson**
**Chief**

**Another Tip of the Barkie Hat to club member K7MXE!**

# The Doc Spike W7OS Museum Report

The Museum's ***h***alicrafters SX-28 Restoration Project is near completion. "Ole Bill" [named for Bill Halligan– founder of the Hallicrafters Co] has been retired to the Telegraphers Desk in the Museum. Both Bill and it's big Armchair Copy 500 ohm Hi-Fi speaker wouldn't fit– so a donated mobile radio speaker was modified with a 120V-12V Power Supply transformer from some Free Table give-a-way junk. The transformer transforms Bill's 500 ohm speaker output to the smaller speakers 4 ohm impedance.

**Ole Bill h's new roost in the Teleg Desk.**

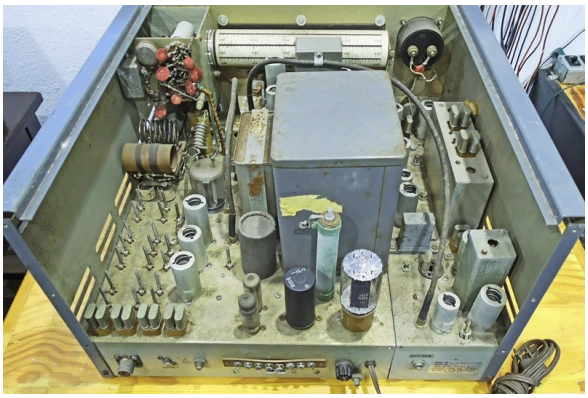
**The Eldico takes the SX-28's spot on the operating table in the Museum's Electronic Surgery Suite.**

Thanks to AC7QN-Chuck for finding the transformer.

The Museum's next Old Radio restoration will be the **Eldico SSB-100F Single Sideband Transmitter.** Thanks to Randy WB4SPB for transcribing these facts from Electric Radio Magazine: The SSB-100F was introduced in December 1956 at $795, was last manufactured in August 1958 and was last advertised in QST in May 1959. Eldico produced 1200 units. 800 for Amateur Radio, the rest for the military (model SSB-100MIL). The SSB-100F is a pretty rare find. A distinguishing feature is the 1-inch O-scope used to monitor amplifier linearity. Note: $795 in 1956 is worth $7015 in today's dollars.

The SSB-100F is the culmination of Eldico's efforts to compete in the rapidly evolving and developing SSB market though the 50's. Early companies in this space with Eldico were Central Electronics, B&W, Elenco, Lakeshore, TRI-X, and Cosmophone. Later Collins, Hallicrafters and others prevailed with less expensive equipment. The SSB-100F is ***backwards compatible*** and will transmit in the AM mode- where a carrier is transmitted but with only one sideband.

In 1956, the affluent ham who was a pioneer in using Single Sideband– would buy ***The Dream Rig***: A Collins 75A4 receiver- pair it up with the Eldico SSB-100F transmitter used to excite a SSB-1000 Linear Amplifier. Perhaps you wonder, "Why not a Collins SSB trans-



**Pretty Clean. There's 20 tubes to test.**

mitter?" Back then Collins had a hard time creating a good stable SSB transmitter.

**The Eldico's chassis looks very clean inside.**

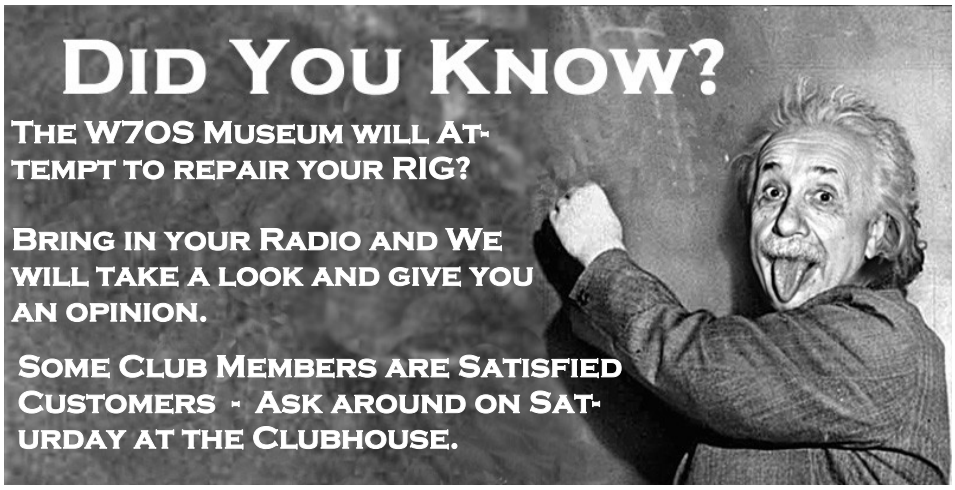
As far back as I can remember in the Lock Up room in the garage– resided this Eldico SSB-100F Transmitter, the matching SSB-1000 Linear Amplifier, and the Collins 75A4 Receiver. A few years ago the Museum staff brought The Dream Rig into the Clubhouse. Randy WB4SBP restored the Collins 75A4 which is paired with a Heathkit Apache transmitter in the Museum. A group of Saturday Clubhouse Linear Amp Experimenters attempted to make the SSB-1000 work– but interest was lost. Perhaps the Linear Amp will get attention after the –100F is up and working.

The SX-28 had about 100 capacitors and resistors replaced. The SSB-100F will not need this intense treatment– being 10 years newer in age and because it is a transmitter– the better components used are less likely to fail. Looking under the hood– I see approx 10 suspect items to replace.

SSB-100F will sit next to it's mate receiver, the Collins 75A4 in the Museum after restoration is complete.

Volunteers will be solicited to help move the 107 pound Heathkit Apache transmitter into the Museum attic storage area.

End of Report. Best Regards, Rich KR7W


DID YOU KNOW?
THE W7OS MUSEUM WILL ATTEMPT TO REPAIR YOUR RIG?
BRING IN YOUR RADIO AND WE WILL TAKE A LOOK AND GIVE YOU AN OPINION.
SOME CLUB MEMBERS ARE SATISFIED CUSTOMERS - ASK AROUND ON SATURDAY AT THE CLUBHOUSE.

# Club Meeting Traffic

## Provided by: Mike W7MWF, Club Secretary

**Radio Club of Tacoma**
**Board of Directors Meeting Minutes**
**February 1, 2017**

**Meeting called to order** at 7:00 p.m. by President Dave W7UUU.

**Officers and Directors Present**

| | |
|---|---|
| President | Dave Ellison W7UUU |
| Vice President | Mike Mikuchonis W7XTZ |
| Secretary | Mike Finnie W7MWF |
| Treasurer | Steve Dightman AF7YD |
| Board | Phil Pia K7PIA |
| Board | Red Cranefield WB7EC |
| Board | Bruce Hanson WE7P |
| Board | Bob Jamison KE7WPK |
| Board | Paul Matney W7PFU |

**Quorum** A quorum was present. 15 Club members signed the attendance roster

**Silent Key or Illness** Albert Bacon N7AEB became a silent key on Saturday, 1/28. He was 89 years old. A funeral service will be held Sunday Feb 12 at 2pm, Mountain View Funeral Home, Aspen Chapel, 4100 Steilacoom Blvd SW, Lakewood. Reception to follow at Zion's River Church, 4602 S 56TH ST.

**Approval of Minutes** The minutes of the January 4, 2017 Board Meeting were approved.

**Secretary's Report** Mike W7MWF reported receipt of the usual Correspondence; Memberships, Periodicals & QSL Cards. Property Insurance Policy has been issued.

Treasurer's Report Steve AF7YD reported on the ongoing transition of Treasurer tasks. Steve also advised that our accounting software is obsolete and requested that we upgrade to Quick Books Pro. A motion was made, seconded and approved to authorize the software purchase in the amount of $169.99 plus tax and shipping. A copy of Steve's report is filed with these minutes.

**Committee / Reports Membership** Mike W7MKE reported that active membership stands at 255, with renewals still coming in. Mike also reported that the Library/ Membership computer has failed and requested a replacement. Also, the cost/benefit of issuing membership cards was discussed. The membership team and club leadership will evaluate requirements and solutions. The computer replacement issue will be addressed as new business.

**Library** Doug AD7AV presented the Annual Library Report and budget request. Doug and his team were thanked for their contributions. Library ops discussion followed, after

which a motion was made, seconded and approved to budget $450.00 for library expenses for 2017. A copy of Doug's report is filed with these minutes.

**Training** Tech class Feb 11/12; VE Exam Feb 14
General class ten sessions beginning Monday, Feb 13

**Info Tech** Randy WB4SPB reported that all systems are nominal, with the exception of the condition of the Library computer, which he will evaluate.

**HF Operations** Phil K7PIA reported that the antenna rotator is malfunctioning. Adam W2NCC offered to climb the tower if needed. Phil will do more trouble-shooting and report back to the Board.

**Repeater Ops** Tim K7TMW reported all repeaters are presently working. The 147.280 repeater controller is obsolete and becoming a burden to maintain. Tim has located a suitable replacement upgrade repeater controller package for $554.90. Discussion followed, after which a motion was made and seconded to authorized the purchase, including tax and shipping. After additional discussion, the question was called and the motion was passed. A copy of Tim's proposed Bill of Materials is filed with these minutes.

**Facilities Mgmt** Bruce WE7P reported that facility functions and condition are nominal

**Property Mgmt** Red WB7EC reported that PMT sales at the January mini-swap meet netted $222.00. Items are being selected for the Mike & Key flea market to be held March 11. Gear will first be offered to club members before transporting to M&K sale.

**Museum** Randy WB4SPB reported that restoration of the SX-28 is ongoing.

**Weds Activity Night** Randy WB4SPB reported that the topic for the February 4WAN is still being refined.

**General Meeting** Dave W7UUU will entertain and enlighten the audience with an encore version of 'Why you should upgrade your license'

**Unfinished Business:** Jerry Room Upgrade- Al N7OMS reported on completion of the remodel of the HF Room – on schedule and under budget. He noted that the issue with sub -panel grounding still needs to be addressed. The audience congratulated Al and his team for their work and indicated that the results were great

**New Business** The condition of the Library computer was further discussed. Randy WB4SPB will evaluate the situation, and was authorized to spend up to $200.00 for the most suitable repair or replacement.

Dave W7UUU reported an upcoming meeting with Tacoma Schools personnel regarding a proposal to equip an unknown number of schools with amateur radio equipment. Dave will report back to the Board after his meeting.

Membership retention and community outreach were discussed and several suggestions were made regarding improving both our retention and recruiting efforts. Dave showed a youtube movie about building membership

**Announcements:** Mike and Key Hamfest will be held March 11, 2017 at the Puyallup Fairgrounds. The Club will have 2 sales tables downstairs and an information table upstairs.

Comm Academy will be held April 22/23 at South Seattle Community College. More info at commacademy.org. Several Club members have indicated that they plan to attend.

**Adjournment**: The meeting was adjourned at 8:41 p.m.

**Radio Club of Tacoma**
**General Membership Meeting**
**February 8, 2017**

The meeting was called to order at 7:30 pm by President Dave Ellison W7UUU at the Pierce County Library Administration Building.

Officers and Directors Present:
_X_ President Dave Ellison W7UUU
_X_ Treasurer Steve Dightman AF7YD
_X_ Board Red Cranefield WB7EC
_X_ Board Phil Pia K7PIA
_X_ Board Paul Matney W7PFU

**Pledge of Allegiance** was led by Mike W7MKE.

**Welcome and Self-Introductions:** Guests: Roger Miller N0NA; New Calls: None
Self-introductions; the Field Day Pig and the Suggestions Box were passed around. 30 names were listed on the sign-in sheet.

**Health and Welfare** Silent Keys: Albert Bacon N7AEB became a silent key on Saturday, 1/28. He was 89 years old. A funeral service will be held Sunday Feb 12 at 2pm, Mountain View Funeral Home, Aspen Chapel, 4100 Steilacoom Blvd SW, Lakewood. Reception to follow at Zion's River Church, 4602 S 56th Street.

**Secretary's Report** (K7PIA, on behalf of W7MWF): All the usual stuff - membership renewals, periodicals, QSL Cards (W7DK, W7DK/100 and W7OS). The property insurance policy was received.

**Treasurer's Report** (AF7YD): The bills are paid. The QuickBooks computer program purchase was authorized by the Board, and has been ordered.

**Committee / Activity Reports:** Membership (W7MKE): There are currently 206 active members, with 3 or 4 pending from last year. If you have anybody in mind who might like to join, encourage them to come to a meeting or visit the Clubhouse on a Saturday.

**VE Report** (AC7WW): Not present. The next VE Session will be Tuesday, February 14th at 7 pm.

**HF Operations** (K7PIA): The rotator on the tower beam antenna is currently of limited functionality; Adam W2NCC volunteered at the last Board Meeting to climb the tower to inspect it.

**Repeater Ops** (K7TMW): Not present. President Dave W7UUU mentioned that funds have been authorized by the Board to replace the 147.28 (Clubhouse) repeater controller with a slick, new unit.

Facilities Mgmt (WE7P): Not present.
Property Mgmt (W7MWF): Not present.
4th Wednesday Activity Night: This month's topic is to be announced.

**Program:** President Dave W7UUU will entertain and enlighten the audience with an encore version of "Why Upgrade to General Class."

**Unfinished Business and Announcements:** The Mike and Key Flea Market is on Saturday, March 11 from 9 am to 3 pm. It will be at the Puyallup Fairgrounds Pavilion, with tickets available at the door for $9.

Comm Academy 2017 is a weekend-long training workshop for volunteer emergency communicators, taking place on April 22-23 at South Seattle College. Early-bird registration for one or both days costs $25/$50, and includes lunch. See the Web page for further details: www.CommAcademy.org. Registration opens Sunday, February 26, 2017.

A General Class course, instructed by Dave Brooks N7HT and Galen Sutton KA7UQH, will be starting soon at the Clubhouse. It will first meet on Monday, Februrary 13th from 7 to 9 pm, and will take place over ten weeks. For more information or to register, please contact Dave Brooks, N7HT at dbbrooks@hotmail.com.

**Show and Tell:** Bill AD7QI demonstrated some LED lights of differing brightness, shapes, and colors, and mentioned how they could be used in various ham radio projects. He also showed off an E-Design mini-oscilloscope to the group.

Mike W7MKE has back patches for sale; see him if interested.

**Tuning and Traffic:** Dave W7UUU worked Art Bell W6OBB on 14.200 USB today.

**Attaboys/girls:** To Steve Dightman AF7YD for stepping up as the Club's new Treasurer.
To Mike Drorbaugh W7MKE for stepping up as the new Membership Committee chair.
To George Salisbury K7GRS for his service as the Membership Committee chair.

**Door Prize:** An assortment of tools was won by Dave W7UUU and Wade KI7JRT.
**Raffle Prize:** An Icom IC-228H 2m rig was won by Mike W7MKE.

**The meeting was adjourned at 8:45 pm.**

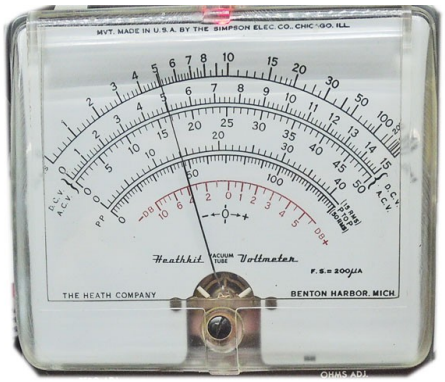
**End of Report**

# HINTS AND KINKS
CONSTRUCTION & INSTRUCTION
BY READER SUBMISSION

## Hack your Heathkit VTVM– for the better... by Rich KR7W

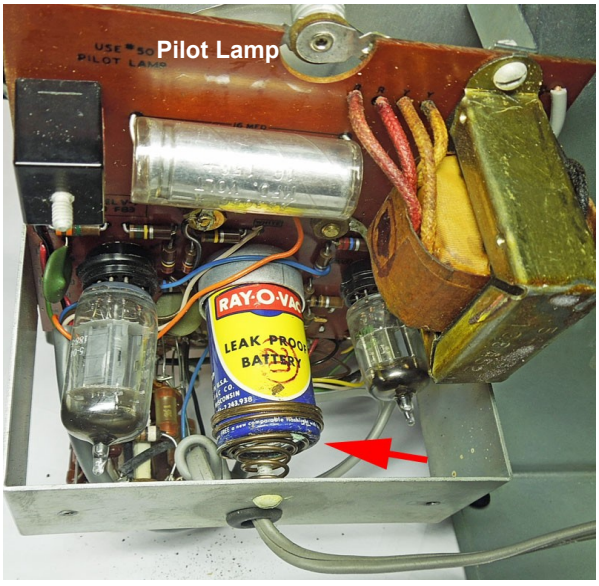
While recently performing the IF and RF Alignment procedures on the W7OS Museum's Halicrafters WW2 SX-28 Receiver… the Army Tech Manual as well as Web Blogs of Old Radio Restorer hobbyists call for using a High Impedance Vacuum Tube Volt Meter- aka **VTVM** – to measure the effects of tweaking this coil or adjusting that transformer.

Randy WB4SPB and I performed the alignment tests using a modern Volt Ohmmeter and a not so high impedance Simpson 260. We got by. But the ideal instrument would have been the high impedance input VTVM with a ***swinging needle meter*** instead of watching digits change on a small screen. BTW-the SX-28 is as tuned up as good as it's gonna get and works pretty well being 70+ years old.



**A Needle with Swing**

Now back at my QTH's hamshack/shop… I wondered if I still owned a VTVM since not too long ago I gave away my Heathkit IM-16 VTVM to a fellow club member- thinking I didn't need it. Yup, still there. Short History Lesson: About 10 years ago I was leaving the Mike and Key Hamfest. In the parking lot– right next to my car were two pieces of Test Equipment sitting in the gravel. It appeared that a buyer forgot to put the items in their car… or a seller discarded the items in the lot– Free for whoever wanted them. Just like on ***The Price is Right*** - I became the grand prize winner and new owner of two pieces of antique electronics equipment - **A Heathkit AG-9A Audio Generator and a V-7 Vacuum Tube Volt Meter.** Both items from 1958 were in pristine condition. When back home– the items went on a shelf for 10 years.

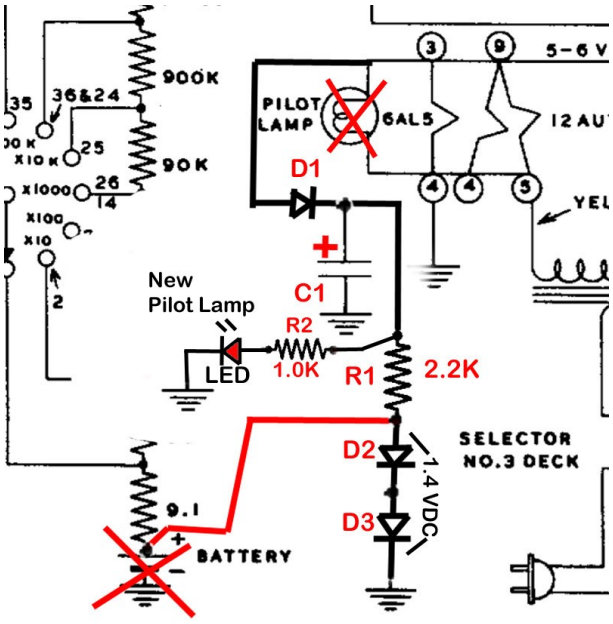


**Inside of VTVM. Possibly the *original 1958* LEAKPROOF C Cell. There's green goo escaping (Red Arrow). The large silver capacitor above the Ray-O-Vac Cell is also leaking goo. Above the Silver Cap is the 6VAC Pilot Lamp– where 6 volts will be harvested from.**

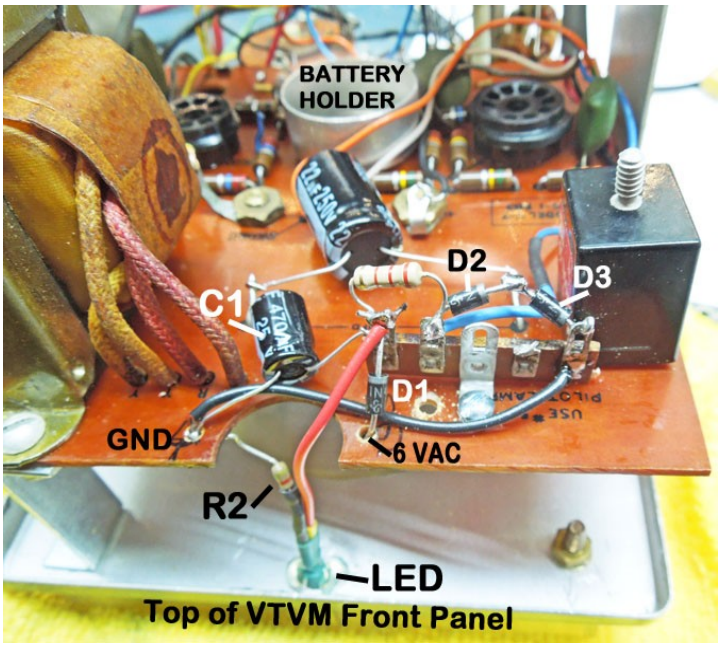
I became curious about the Free-Prize VTVM– did it work? The user manual found on-line reminded me that there is a C cell Battery inside for the Ohmmeter function that could possibly leak and corrode parts on the circuit board.

Looking at the VTVM schematic– The Negative side of the C battery connects to GND. Knowing this allows for ***hacking*** a Battery Eliminator to replace the C-Cell Battery.

The Battery Eliminator schematic shows D1 (1N4009) and C1 (470 Mfd) as a half wave rectifier. Resistor R1 limits current flow into diodes D2 and D3 (1N4009) in series. The diodes each drop .7 volts to provide 1.4 volts to feed into the circuit where the Ray-O-Vac




**C Cell Batt is shown at Lower Left. Pilot Lamp is removed. Connections provide 6 VAC filament voltage for new DC supply.**




**Components placed on VTVMs circuit board. See if I followed the schematic correctly.**

**C-battery** used to reside. Approx .004 amps flows through R1 and no heat is detected. R2 lowers the voltage to a RED 3 volt super brite LED that became the new Power On Pilot Lamp– which illuminates better than the 1958 screw in incandescent bulb.

The Common and AC-Ohms Banana Jacks were replaced with Binding Post Banana Jacks. The Center 1/4" Phone Jack for the plug-in DC probe was also replaced with a Banana Binding Post. This style of Binding Posts provide easy connection with an Alligator Clip or a Banana Plug test leads– a much more universal way to connect to items being tested.

The last hack / modification was to add a 3 wire AC Power Cord– which was harvested from an old battery charger found on the Clubhouse Free Table.

Every electronics workshop needs a meter that has a needle that swings. You might be as lucky as me and find one for your shop in an unexpected place- Like the Radio Club's Free Table. Ya never know.

30 73 SK DE KR7W CL

**New User Interface– Banana Binding Posts**

# TNT THE NEW THING

## WHAT'S NEW AND NOTABLE IN HAM RADIO?

CONTRIBUTIONS BY READERS LIKE YOU

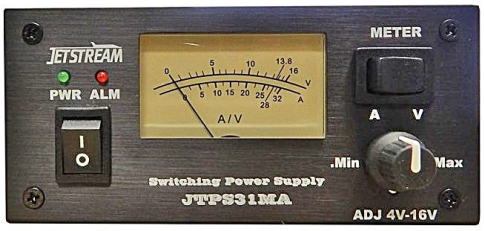
Icom plans to release for North America purchase- the *New Fangled* **IC-7610 HF/50 MHz 100 W SDR transceiver—**sometime in August 2017. Price unknown at this time.

Following on from the technology incorporated into the IC-7300, the IC-7610 adopts the same RF direct sampling system for signal processing. By converting the analog signal directly to a digital signal and processing it within the FPGA (Field Programmable Gate Array), it provides improved transmission phase noise and excellent RMDR of 105 dB (at 1 kHz detuning).

The IC-7610 will have two independent receivers, enabling simultaneous reception of two frequencies in different bands/different modes.

The IC-7610 will also feature high-speed, high-resolution performance. The real-time spectrum scope supports different bands and a dual display that can monitor different modes. It will also have a waterfall display function that displays received signals in time sequence. The DIGI-SEL unit will be available to both the main side and the sub side of the receiver. In addition, the IC-7610 adopts a large 7-inch full-color touch screen panel.

***Disclaimer: KR7W has no financial ties with Icom or Icom Dealers. KR7W simply likes most Icom products and thinks they are technically superior to other popular amateur radio manufacturers.***



Power up your new Icom 7610 or any other 100 watt or less transceiver with the **JETSTREAM JTPS31MA Power Supply.**

Variable 4-16VDC - 30 Amp Surge - 25 Amp Continuous output.

Light Weight, only 3 lbs! - Compact, only 5" x 2.375" x 6.125"

Anderson Power Pole Connectors on back

Switchable volt/current meter with Over voltage protection + Over current protection

I own this power supply… and I highly recommend it. See eham.net for their 4.9/5 reviews. **http://www.eham.net/reviews/detail/9503**

# The Logger's Bark Photo Page

**Some memories from my W7DK 2016 Field Day Photo Album.**

**2017 ARRL Field Day is June 24-25.**

**RCT will soon be announcing it's 2017 Field Day Plans. Stay Tuned for more info.**

# RADIO CLUB OF TACOMA

## 1916 - 2016

## 100 YEARS OF SERVICE

**THE LOGGER'S BARK is the *OFFICIAL PUBLICATION OF THE RADIO CLUB OF TACOMA*… and is published by RCT, PO Box 11188, Tacoma, WA 98411. The Radio Club of Tacoma is a non-profit corporation as defined by law, and all proceeds will be used exclusively for charitable and educational purposes. The Radio Club of Tacoma's Club House is located at 1249 Washington St, Tacoma, WA 98411, phone: 253-759-2040.**

## CLUB OFFICERS

**President: Dave Ellison, W7UUU - w7uuu@w7dk.org**
**Vice Pres: Mike Mikuchonis, W7XTZ - w7xtz@w7dk.org**
**Secretary: Mike Finnie, W7MWF - w7mwf@w7dk.org**
**Treasurer: Steve Dightman, AF7YD - af7yd@w7dk.org**

## 5 BOARD MEMBERS

**Bruce Hanson, WE7P - we7p@w7dk.org**
**Paul Matney, W7PFU - w7pfu@w7dk.org**
**Bob Jamison, KE7WPK - ke7wpk@w7dk.org**
**Red Cranefield, WB7EC - wb7ec@w7dk.org**
**Phil Pia, K7PIA - k7pia@w7dk.org**

## LOGGER'S BARK STAFF

**Editor: Rich Patrick KR7W**
**Contributors: The members of the Radio Club of Tacoma**
**Send articles to: 599kr7w@gmail.com Bark, PO Box 11188, Tacoma, WA 98111**

**The Fine Print: The Logger's Bark is published once a month for the membership of The Radio Club of Tacoma or interested ham radio enthusiasts. The Bark is delivered by PDF file on the club's website: www.w7dk.org.**

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## RADIO CLUB REPEATERS

| | | |
|---|---|---|
| Central Tacoma: | 147.280 + PL=103.5 | |
| Crawford Mountain | 147.380 + PL=103.5 | (E of Olympia @ 1500 ft ASL) |
| Central Tacoma: | 440.625 + PL=103.5 | |
| North Tacoma: | 145.21 – PL=141.3 | |

**www.w7dk.org [LINK] - For the latest and most current information on events and activities, visit the Radio Club of Tacoma Website.**